WHAT IS CLAIMED IS:

1. An apparatus for transmitting and receiving radio signals in a pico-BTS (Base station Transceiver System), comprising:

a plurality of antennas for transmitting and receiving the radio signals, installed in predetermined positions; and

a plurality of repeaters connected to corresponding ones of said antennas, for controlling levels of the transmission and reception signals to a predetermined level.

2. The apparatus as claimed in claim 1, further comprising a plurality of bi-directional amplifiers for compensating for a signal loss, installed in predetermined positions between the repeaters.

3. The apparatus as claimed in claim 1, wherein the antennas each comprise a microstrip patch antenna included in the corresponding repeater.

4. An apparatus for transmitting and receiving radio signals in a pico-BTS (Base station Transceiver System) with at least one operating frequency, comprising:

at least one radio unit for said at least one operating frequency;

a cable front-end unit for combining the operating frequency output from the radio unit, and distributing a received operation frequency to the radio unit;

a plurality of antennas for transmitting and receiving the radio signals, installed in

predetermined positions; and

a plurality of repeaters connected to the cable front-end unit through a coaxial cable and a plurality of dividers, said repeaters being also connected to corresponding ones of said antennas to control levels of the transmission and reception signals to a predetermined level.

5. The apparatus as claimed in claim 4, further comprising a plurality of bi-directional amplifiers for compensating for a signal loss, installed in predetermined positions between the repeaters.

6. The apparatus as claimed in claim 4, wherein the antennas each comprise a microstrip patch antenna included in the corresponding repeater.

7. An apparatus for transmitting and receiving radio signals in a pico-BTS (Base station Transceiver System) having three assigned frequencies, comprising:

a plurality of radio unit for transmitting and receiving signals on said three assigned frequencies;

a cable front-end unit for combining transmission signals transmitted on the three assigned frequencies output from the radio units, and dividing a received combination signal to separate reception signals received on the three assigned frequencies for distribution to the radio units;

a plurality of dividers serially distributed along a coaxial cable connected to said cable front-end unit;

a plurality of antennas for transmitting and receiving radio signals, installed in predetermined

positions; and

a plurality of repeaters, each being connected between a corresponding one of said plurality of dividers and a corresponding one of said plurality of antennas, to control levels of the transmission and reception signals to a predetermined level.

8. The apparatus as claimed in claim 7, wherein the antennas each comprise a microstrip patch antenna included in the corresponding repeater.

9. The apparatus as claimed in claim 7, further comprising a plurality of bi-directional amplifiers serially installed along said coaxial cable in predetermined positions between certain ones of said dividers for compensating for a signal loss.

10. The apparatus as claimed in claim 7, wherein said a cable front-end unit comprises:

a combiner for combining said transmission signals transmitted on the three assigned frequencies output from the radio units; and

a divider for dividing said received combination signal to separate reception signals received on the three assigned frequencies for distribution to the radio units.

11. The apparatus as claimed in claim 10, wherein said a cable front-end unit further comprises a duplexer, said duplexer comprising:

a first bandpass filter for filtering the transmission signals to be applied to said coaxial cable; and

a second bandpass filter for filtering the reception signals received from said coaxial cable.

12. The apparatus as claimed in claim 11, wherein the antennas each comprise a microstrip patch antenna included in the corresponding repeater.

13. The apparatus as claimed in claim 12, further comprising a plurality of bi-directional amplifiers serially installed along said coaxial cable in predetermined positions between certain ones of said dividers for compensating for a signal loss.